Mitigation or Pollution Prevention Action/Measure Contained in JEA ROD and EIS (Items in bold are specifically contained in ROD)	**Status of Implementation and Actions Taken**	**Means of Verifying that commitment Has Been Implemented (e.g., monitoring data, photographs)**	**Additional Comments**
Action related to Land Use: The project will be constructed to minimize impacts to the number, density, and species of trees. The planting of trees to replace those removed during construction is required under the city of Jacksonville's tree protection regulations. JEA will supply replacement trees from their tree farm to the local civic association for the latter to use wherever needed to implement the community's beautification program.	Tree replacement program planned.	Survey of buffer area and documentation of the number of trees given per year to the community.	1. A survey of the San Carlos Creek area purchased as a buffer by JEA is being surveyed to determine if the ordinance has been met. 2. In addition to meeting the ordinance requirement, JEA is working on planting trees at the tree farm to provide committed trees to the community.
Action related to Air Quality: During construction, vehicles and machinery will be equipped with standard pollution-control devices to minimize emissions. Dust suppression measures (i.e., watering) will be used to minimize the occurrence of fugitive dust during construction activities.	Ongoing use of watering truck on the site.	Photographs.	
Action related to Air Quality: During operation, the handling and transfer of coal, petroleum coke, and limestone at the site will generate PM-10 emissions. To reduce these emissions to acceptable levels, the project will minimize the number of handling and transfer points, enclose the conveyors and material unloading points, use wetting systems for particle suppression, and install collection devices such as baghouses.	Construction in progress. Conveyors will be covered. Baghouses are part of the design and are in the process of being constructed. Unit 2 approaches startup. Unit 1 construction continues.	Will be supported by monitoring data.	JEA modified the air permit to eliminate the hydrators and return emissions from ash loading area(s) back to the system rather than allow release. A wet scrubber system has replaced the hydrator system. Ash handling will be by slurry to the Byproduct Storage Area rather than hauling and then wetting. Eliminates several release points.
Action related to Air Quality: The circulating fluidized bed (CFB) combustor will use limestone injection to remove sulfur dioxide (SO_2). A polishing scrubber on the	Construction in progress.		Initial Synchronization tentatively scheduled for late January 2002 for Unit 2.

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flue gas stream will further remove SO_2.			
<u>Action related to Air Quality:</u> Compared with conventional boilers, the CFB combustor will produce less amounts of oxides of nitrogen (NO_x) because of its lower flame temperature. Selective non-catalytic reduction technology will be incorporated to further reduce NO_x formation.	Construction in progress.	Will be supported by monitoring data.	Initial Synchronization tentatively scheduled for late January 2002 for Unit 2.
<u>Action related to Air Quality:</u> Emissions of particle matter from the CFB combustor will be controlled using an electrostatic precipitator or a baghouse filter system.	Design requires fabric filter system. Construction is in progress.	As-built drawings.	Unit 2 construction is complete. Unit 1 construction continues.
<u>Action related to Air Quality:</u> During the 6- to 12-month transition period when Unit 2 (i.e., JEA circulating fluidized bed combustor project) is on-line and before the Unit 1 re-powering occurs, JEA will reduce maximum SO_2 emissions from the existing Unit 1 by nearly 93 percent. This will be accomplished through using a blend of natural gas and fuel oil with an SO_2 emission rate averaging no more than 0.143 lb/Mbtu (effectively, a blend with a sulfur content averaging no more than 0.13%).		Will be supported by monitoring data.	
<u>Action related to Air Quality</u>: JEA will reduce stack emissions (SO_2, oxides of nitrogen, and particulates) from Northside Generating Units (Units 1, 2, and 3) by 10 percent compared to emissions during a		Will be supported by monitoring data.	

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recent 2-year operating period (1994-95) of the station (Units 1 and 3).			
Action related to Groundwater Quality: JEA will reduce total annual groundwater consumption at Northside Generating Station after Units 1 and 2 are re-powered (as compared to 1996 levels) by 10 percent.		Will be supported by data generated for Consumptive Use Permit.	Reuse efforts and other design improvements will be important in attaining the goal. Estimated 1 MM gpd of reuse scheduled.
Action related to Groundwater Quality: The currently unlined settling basins will be lined for the proposed project, and the supernatant from the settling basins will be routed to the reuse tank. On an occasional basis when the reuse tank is full, the overflow from the settling basins will be directed to the existing evaporation/percolation ponds and consequently to the surficial aquifer.	No longer applicable.		Design change in which settling ponds are not lined but expanded. Reuse will be from the District II Water Reclamation Facility (WRF). All overflow will go to evaporation/percolation ponds as recharge. The WRF is a more reliable source of reuse water.
Action related to Surface Water Quality: During construction, standard engineering practices such as straw berms, liners, cover materials, and grading will be implemented as required to minimize runoff, erosion, and sedimentation near the site. Accidental spills of construction materials such as solvents, paint, caulk, oil, and grease that could contain hazardous substances will be cleaned up in a timely manner in accordance with a spill prevention, control, and countermeasure plan.	All spills of oils greater than 10 gallons are reported to appropriate agencies. Cleanup is to levels and standards set by agencies. Turbidity screens are in place as required. Standard practices are being used to minimize runoff, erosion and sedimentation.	Spill prevention plan maintained on-site. Routine, documented inspections are on file. Emergency action plan on-site.	Environmental staff perform routine inspections of all areas. Written reports are generated from tracking programs in ACCESS. There is also a current spill prevention control plan for the facility.
Action related to Surface Water Quality: Runoff from facilities that will be built as part of the project will be			All stormwater ponds associated with the repowering project have been completed. Only pond 1

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used in plant processes or routed through detention basins equipped with baffles or oil skimmers before being discharged at stormwater outfalls. The detention basins will reduce the maximum rate of stormwater discharge by increasing the length of time during which the discharge occurred. The baffles or oil skimmers will collect contaminants such as oil and grease that float on top of the stormwater.			which serves the boiler(s) area remains to be certified with the appropriate agency (FDEP).
Action related to Surface Water Quality: Accidental spills from the project will be cleaned up in a timely manner in accordance with spill prevention, control, and countermeasure plan and the best management practices plan for the facility. Tanks containing liquids such as fuel oils, waste oils, turbine lubrication oils, and fuel additives will be either (1) surrounded by berms or dikes that will contain accidental leaks or spills, or (2) have controlled drainage areas whose runoff is routed to and collected in sumps. The sumps are piped into the wastewater treatment system. Rapid cleanup of any liquid impounded by secondary containment that did not enter the wastewater treatment system will minimize seepage into the groundwater.	All spills of oils greater than 10 gallons are reported to appropriate agencies. Cleanup is to levels and standards set by agencies.	Plan maintained by environmental staff. All items of concern are in a tracking system for reporting purposes.	Spill prevention, control plan established for site. BMPs are also established. Chemical Waste Treatment System (CWTS) has an oil settling area. Discharge from CWTS is evaporation/percolation ponds with only emergency discharge to surface waters.
Action related to Surface Water Quality: Impacts associated with transfer piping failure or leakage will be minimized because (1) the piping will be routinely inspected on a daily			An inspection program will be implemented once operation begins. Pressure testing of lines is a routine part of QA/QC and startup activities. In-Service

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basis and more frequently while pumping is in progress, and (2) most pipeline failures will manifest themselves as small-scale, gradually increasing leaks that will be detected during routine inspection before excess leakage will impact the environment.			Leakage Testing is also performed.
Action related to Geological Resources: Geotechnical site investigations will precede construction of any new major structures associated with the project. Such investigations will be designed to reveal any solution cavities within 100 ft of the surface that could cause the surface to collapse or subside appreciably. If a cavity were detected, collapse and subsidence at the surface will be prevented by filling the cavity.	An initial geotechnical report was performed by PSI, Inc. Other soil borings were conducted for the Byproduct Storage Area and the percolation/evaporation ponds used with the CWTS.	Report filed with initial permits.	
Action related to Floodplains: The land occupied by and immediately surrounding the re-powered units will be sloped to promote drainage away from structures.	Stormwater ponds have been designed and will be constructed to manage runoff.	Site Drainage and Grading Plans are on file. (Drawings 46-1-41-204 and 46-1-41-205.)	
Action related to Wetlands: Judicious placement of facilities will minimize potential impacts on wetlands. The site for the ash storage area will include a 200-ft buffer zone extending to the San Carlos Creek floodplain, which will minimize or avoid any impacts to the San Carlos Creek System.	Construction of Cell 1 is substantially completed and certification is being requested from the FDEP.	Drawing 46-1-41-201 sets a minimum wetland buffer zone of 200 feet. "As-built" drawings will substantiate the actual setback.	
Action related to Wetlands: To offset the loss of 1.8 acres of wetlands during construction of the ash storage area, JEA will purchase slightly greater than 3 acres of	1. 3+ acres of wetlands purchased. 2. Restoration of 1 acre of salt marsh begun.	1. Received Mitigation Credit Acquisition Statement. (10/29/99) 2. Photographs.	

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wetlands from an off-site mitigation bank and will restore 1 acre of salt marsh (resulting in a mitigation ratio greater than 2.2 to 1 – more than 4 acres of wetlands gained to 1.8 acres lost). In addition, JEA will set aside and preserve 14 acres of undisturbed, uplands maritime oak hammock along the west bank of San Carlos Creek.	3. 14 acres of undisturbed uplands have been set aside.	3. Completed 9/11/00.	
Action related to Ecological Resources: Thermal discharges will not be expected to have a measureable effect on the biota of the area because the maximum circulating flow rates, condenser temperature rises, and total area of the discharge plume that are currently limited under an NPDES permit will be maintained. Bottom-dwelling organisms such as macro-invertebrates will not experience effects as a result of thermal discharges because the discharge plume will be directed upward and will largely be a surface phenomenon.		Monitoring data as required by NPDES permit.	
Action related to Aquatic Resources: To mitigate impingement, a fish return system will continue to be in operation at Northside Generating Station. A 1994 study by the U.S. EPA concluded that this system represents the best available technology for mitigating impingement.	Fish return system still in operation.		
Action related to Ecological Resources: In order to prevent any juvenile turtle entrapment in the Northside Generating Station intake	Installation of 6-inch centered grid completed and in operation.	Site inspections concerning maintenance of the system.	

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basin, JEA will install on the intake trash rakes a finer grid of mesh bars (welded wire screen on 6-inch centers contrasted to the current 12-inch centers).			
Action related to Ecological Resources: In order to prevent harm/entrapment of manatee populations (e.g. between docks and vessels), JEA will generate and execute a dock design (e.g., widely spaces support pilings, rather than one long continuous structure) that will allow sufficient space between vessels and the dock structure such that manatees could easily avoid being trapped.	Design approved and construction has been completed.	Manatee survey log maintained.	Dock construction has been completed. Manatee warning signs have been placed at the dock. Locations of the signs were approved by the State of Florida.
Action related to Ecological Resources: Prior to construction, a gopher tortoise survey will be conducted to identify burrow that must be relocated according to conditions of the collecting permit from the Florida Game and Freshwater Fish Commission.	Relocation has been completed.	Relocation area inspected as part of routine inspection process. Inspection reports available for review.	Fencing to prevent re-entry to construction area inspected routinely.
Action related to Transportation: JEA will encourage car pooling and will suggest alternate routes in order to reduce the anticipated congestion associated with the section of Heckscher Drive from State Route 9A to Drummond Point.			The number of workers has decreased with the completion of construction of Unit 2. Number of workers continues to decline reducing traffic issues.
Action related to Transportation: JEA will monitor traffic (at the rear entrance of the site) on New Berlin Road, especially at the intersection of	An off-duty police officer hired as part of the project is located at the intersection during peak	Verification may be obtained through payroll. Photographs may be taken if necessary.	Request for temporary traffic light was denied.

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Ostner and New Berlin Roads, and to place a police officer at the intersection to direct traffic during peak times, if needed. Should the presence of a police officer prove inadequate to control project-induced traffic, JEA will pursue authorization of a temporary traffic signal at the intersection.	hours of traffic.		
Action related to Noise: JEA will install mufflers if high-pressure steam blowouts are conducted. Or, if mufflers are not installed, JEA will measure noise levels at the nearest residences to ensure that the levels conform to the Noise Pollution Control ordinance limits. JEA has historically implemented a public awareness program (e.g., advance notification) regarding high-pressure steam blowouts and will do so during the project, if necessary. JEA will also notify beforehand all residences within 0.5 miles of the high-pressure steam cleaning operation. This advisory will alert people to go inside to reduce the effects of the noise. As a mitigation measure, only daytime high-pressure steam blowouts will be permitted and non-Sunday high-pressure steam blowouts will be allowed.	Silencers have been installed and were very effective. Noise levels were measured on-site and at residences during steam blowouts.	Printouts of the noise levels measured during Unit 2 blowouts are available.	No violations of the Noise Pollution Control Ordinance were noted. The community has been informed and actively involved in ensuring that noise related to steam blowouts was not an issue. The same type of equipment for silencing will be used for Unit 1 when the time comes.
Action related to Noise: During pile driving, JEA will use an enclosure technology or a less noisy type of pile driving (e.g., vibratory methods), as necessary, to ensure that the daytime construction noise level would not	Pile driving activities completed.		

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exceed 65 dB(A) at the nearest residences.			
Action related to Noise: JEA will install baffle silencers for the fans of the facility and enclose coal and limestone crushers in a sound-insulating building to reduce noise levels during operation to comply with the City of Jacksonville noise ordinance level of 60 dB(A) at any residence.	Construction completed.		Crushing not in progress at the present time. Unit 2 will begin operation soon.